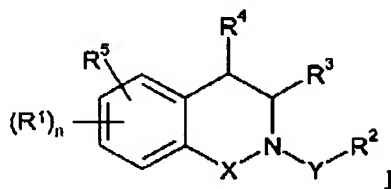


Atty Docket No.: R0149B-REG  
 USSN: 10/791,578

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### Claim Listing

1. (Currently Amended) A compound of the formula:



or a pharmaceutically acceptable salt,

wherein:

$n$  is from 0 to 3;

$X$  is  $-CR^aR^b-$  wherein  $R^a$  and  $R^b$  each independently are hydrogen or alkyl;

--- is an optional bond;

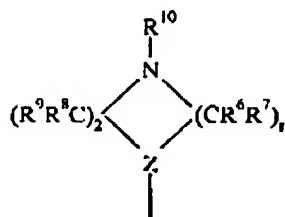
$Y$  is  $-SO_2-$ ;

each  $R^1$  independently is halo, alkyl, haloalkyl, hydroxy, nitro, alkoxy, cyano,  $-S(O)_q-R^c$ ,  $-NR^eR^f$ , or  $-C(=O)-NR^eR^f$ , wherein  $q$  is from 0 to 2 and  $R^c$  and  $R^f$  each independently are hydrogen or alkyl;

$R^2$  is aryl phenyl or naphthyl optionally substituted with halo, alkoxy, haloalkyl, alkyl, alkylsulfonyl,  $-C(O)-NH_2$  or  $-NH-C(O)-NH_2$ ;

$R^3$  and  $R^4$  each independently are hydrogen or alkyl; and

$R^5$  is at the 5- or 6- position of the isoquinoline ring system and is of the formula:



wherein:

$Z$  is  $-N-$ ;

$r$  is 2; and

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$R^6$ ,  $R^7$ ,  $R^8$ ,  $R^9$  and  $R^{10}$  each independently are hydrogen or alkyl.

2. (Original) The compound of claim 1, wherein  $R^5$  is located at the 5-position of the isoquinoline ring system.
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Previously presented) The compound of claim 1, wherein  $R^a$  and  $R^b$  are hydrogen.
7. (Canceled)
8. (Previously presented) The compound of claim 1, wherein  $R^2$  is optionally substituted phenyl.
9. (Previously presented) The compound of claim 1, wherein  $R^2$  is optionally substituted naphthalenyl.
10. (Currently amended) The compound of claim 8, wherein  $R^2$  is selected from the group consisting of phenyl, 2-halophenyl, 3-halophenyl, 4-halophenyl, 2,3-dihalophenyl, 2,4-dihalophenyl, 3,4-dihalophenyl, 2,5-dihalophenyl, 3,5-dihalophenyl, 2,6-dihalophenyl, 2-haloalkylphenyl, 3-haloalkylphenyl, 4-haloalkylphenyl, 2,3-dihaloalkylphenyl, 2,4-dihaloalkylphenyl, 3,4-dihaloalkylphenyl, 2,5-dihaloalkylphenyl, 3,5-dihaloalkylphenyl, 2,6-dihaloalkylphenyl, 2-alkoxyphenyl, 3-alkoxyphenyl, 4-alkoxyphenyl, 2,3-dialkoxyphenyl, 2,4-dialkoxyphenyl, 3,4-dialkoxyphenyl, 3,5-dialkoxyphenyl, 2,5-dialkoxyphenyl, 2,6-dialkoxyphenyl, 2-alkylphenyl, 3-alkylphenyl,

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4-alkylphenyl, 2,3-dialkylphenyl, 2,4-dialkylphenyl, 3,4-dialkylphenyl, 3,5-dialkylphenyl, 2,5-dialkylphenyl, and 2,6-dialkylphenyl.

11. (Original) The compound of claim 9, wherein  $R^2$  is naphthalene-1-yl or naphthalene-2-yl.

12. (Previously presented) The compound of claim 1, wherein  $n$  is 0.

13. (Previously presented) The compound of claim 1, wherein  $R^3$  and  $R^4$  are hydrogen.

14. (Canceled)

15. (Original) The compound of claim 14, wherein  $R^6$ ,  $R^7$ ,  $R^8$ ,  $R^9$  and  $R^{10}$  are hydrogen.

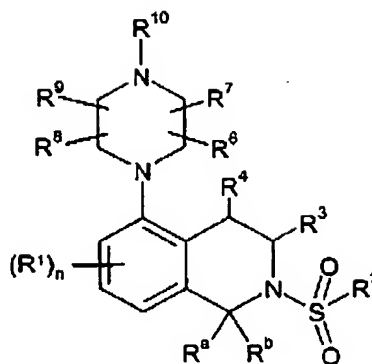
16. (Original) The compound of claim 14, wherein  $R^6$ ,  $R^7$ ,  $R^8$  and  $R^9$  are hydrogen and  $R^{10}$  is alkyl.

17-27. (Canceled)

28. (Canceled)

29. (Original) The compound of claim 1, wherein said compound is of the formula:

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and wherein  $n$ ,  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^6$ ,  $R^7$ ,  $R^8$ ,  $R^9$ ,  $R^{10}$ ,  $R^a$  and  $R^b$  are as defined in claim 1.

30. (Canceled)

31. (Currently Amended) ~~The compound of claim 1, wherein said A~~  
 compound is selected from the group consisting of:

- 2-benzenesulfonyl-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;
- 2-benzenesulfonyl-5-(4-methylpiperazin-1-yl)-1,2,3,4-tetrahydroisoquinoline;
- 2-(4-fluoro-benzenesulfonyl)-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;
- 2-(4-methoxy-benzenesulfonyl)-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;
- 2-(3-fluoro-benzenesulfonyl)-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;
- 2-(3,5-dichloro-benzenesulfonyl)-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;
- 2-(3,5-bis-trifluoromethyl-benzenesulfonyl)-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;
- 2-(2,5-dimethoxy-benzenesulfonyl)-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;
- 2-(3-chloro-4-fluoro-benzenesulfonyl)-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;
- 2-(2-fluoro-benzenesulfonyl)-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;
- 2-(2-chloro-benzenesulfonyl)-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;
- 2-(3-chloro-benzenesulfonyl)-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;
- 2-(3-methyl-benzenesulfonyl)-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;
- 2-(2,3-dichloro-benzenesulfonyl)-5-piperazin-1-yl-1,2,3,4-tetrahydroisoquinoline;

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2-(2-chloro-4-fluoro-benzenesulfonyl)-5-piprazin-1-yl-1,2,3,4-tetrahydroisoquinoline;  
2-(2,5-dichloro-benzenesulfonyl)-5-piprazin-1-yl-1,2,3,4-tetrahydroisoquinoline;  
2-(naphthalene-1-sulfonyl)-5-piprazin-1-yl-1,2,3,4-tetrahydroisoquinoline;  
2-(naphthalene-2-sulfonyl)-5-piprazin-1-yl-1,2,3,4-tetrahydroisoquinoline;  
2-(2-Methanesulfonyl-benzenesulfonyl)-5-piprazin-1-yl-1,2,3,4-tetrahydroisoquinoline;  
3-(5-Piprazin-1-yl-3,4-dihydro-1H-isoquinoline-2-sulfonyl)-benzamide; and  
[2-(5-Piprazin-1-yl-3,4-dihydro-1H-isoquinoline-2-sulfonyl)-phenyl]-uracil; and  
~~8-(5-Piprazin-1-yl-3,4-dihydro-1H-isoquinoline-2-sulfonyl)-quinoline.~~

32. (Original) A pharmaceutical composition comprising an effective amount of at least one compound of claim 1 in admixture with a pharmaceutically acceptable carrier.

33. (Currently Amended) A method for ~~treating a central nervous system disease state in a subject~~ enhancing cognitive memory in an Alzheimer's patient, said method comprising administering to said ~~subject~~ Alzheimer's patient a therapeutically effective amount of a compound of claim 1.

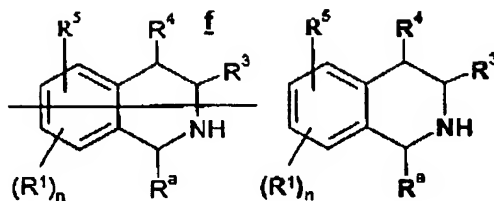
34. (Canceled)

35. (Canceled)

36. (Currently Amended) A method for producing a compound of claim 1, said method comprising:

reacting a compound of the formula:

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wherein  $n$ ,  $R^1$ ,  $R^a$ ,  $R^3$ ,  $R^4$  and  $R^5$  are as recited in claim 1,

with a sulfonyl halide of the formula:  $R^2-SO_2-G$  wherein G is halo and  $R^2$  is as defined in claim 1;

to yield a compound of formula I wherein Y is  $-SO_2-$ .